UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE : February 7, 2012

SUBJECT: Region III Data QA Review

FROM: Colleen Walling
Region III ESAT RPO (3EA20)

TO: Rich Fetzer
Regional Project Manager (3HS31)

Attached is the inorganic data validation report for the Dimock Residential Groundwater site (Case #: 180-2644-01 (2 Samples) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2763.

Attachment

TO: #0037 TDF: #01079A

cc: Gene Nance (Techlaw)
Suddha Graves (Techlaw)

Lockheed Martin IS&GS – Civil
Energy & Environment
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Ex. 4 - CBI

LOCKHEED MARTIN
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Date: February 06, 2012

Subject: Inorganic Data Validation (IM2 Level)
Project: 180-2644-1
Site: Dimock

From: Ex. 4 - CBI
Inorganic Data Reviewer

Ex. 4 - CBI
Senior Oversight Chemist

To: Colleen Walling
ESAT Region 3 Project Officer

OVERVIEW

Third party Project 180-2644-1 consisted of two (2) aqueous samples analyzed for the following parameters according to the methods listed below. Samples were analyzed by TestAmerica-Pittsburgh (TALPA).

Parameter	Analytical method	Parameter	Analytical method
Ammonia	EPA 350.1	Acidity	SM 2310B
HEM (Oil & Grease)	EPA 1664A	Chloride	EPA 300.0
Alkalinity	SM 2320B	Total Dissolved Solids	SM 2540C
Total Suspended Solids	SM 2540D	pH	SM 4500H+ B
Methylene Blue Active Substances	SM 5540C		

SUMMARY

Data were validated according to Region 3 Modifications to the National Functional Guidelines for Inorganic Data Review, Level IM2, and is assigned the Superfund Data Validation Label S4VM (Stage_4_Validation_Manual). Areas of concern with respect to data usability are listed below.

Data in this case have been impacted by outliers present in laboratory blanks. Details of these outliers are discussed under "Minor Problem," specific samples affected are outlined in "Table 1A" and qualified analytical results for all samples are summarized on a single Data Summary Form (DSF).

MINOR PROBLEM

Method Blanks (MBs) had reported results greater than the Method Detection Limits (MDLs) for ammonia and chloride. Positive results for these parameters in affected samples which are less than five times (<5X) blank concentrations may be biased high and have been qualified "B" on the DSF.

NOTES

Holding times were met for all parameters for the samples in this sample set.

Results for quality control analyses [Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD), laboratory duplicate and matrix spike] were within control limits for all parameters for the samples in this sample set.

Test parameter Oil & Grease is officially named n-Hexane Extractable Material (HEM).

Sample volumes other than one (1) liter were used in the analysis of HEM for the samples in this sample set. Dilution factors were adjusted on the DSF to reflect this variance.

ATTACHMENTS

INFORMATION REGARDING REPORT CONTENT

Table 1A is a summary of qualifiers applied to the laboratory-generated results during data validation.

Table 1A	Summary of qualifiers on data summary forms after data validation
Table 1B	Codes used in comments column of Table 1A
Appendix A	Glossary of Data Qualifier Codes
Appendix B	Data Summary Form(s)
Appendix C	Chain of Custody Records
Appendix D	Laboratory Case Narrative

DCN: 180-2644-1_General

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY FORM AFTER DATA VALIDATION

Project: 180-2644-1

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	NON-DETECTED VALUES	BIAS	COMMENTS*
Ammonia	Both samples	B		High	MB (0.0450 J mg/L)
Chloride	TC-1	B		High	MB (0.685 J mg/L)

* See explanation of comments in Table 1B

TABLE 1B
CODES USED IN COMMENTS COLUMN

MB	=	Method blank had results >MDLs [results are in parenthesis]. Positive results which are <5X blank concentrations may be biased high.

Appendix A
Glossary of Data Qualifier Codes

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

Appendix B
Data Summary Forms

DATA SUMMARY FORM: GENERAL CHEMISTRY Page __1_ of __1__

Project #: 180-2644-1
Site : DIMOCK
Lab. : TALPA

Number of Soil Samples : 0
Number of Water Samples : 2

Sample Number / Location:		TC-1		AW-2							
Matrix :		Water		Water							
Units :		mg/L		mg/L							
Date Sampled :		08/04/2011		08/04/2011							
Time Sampled :		09:30		13:20							
Dilution Factor :		1.0 / 1.26		1.0 / 0.95							
ANALYTE	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Ammonia, distilled	0.10	0.15	B	0.10	B						
Acidity	5.0										
HEM (Oil & Grease)	5.0	+		+							
Chloride	1.0	2.1	B	21							
Alkalinity	5.0	120		89							
Total Dissolved Solids (TDS)	10	220		280							
Total Suspended Solids (TSS)	4.0										
Methylene Blue Active Substances	0.050										

Sample Number / Location:		TC-1		AW-2							
Matrix :		Water		Water							
Units :		SU		SU							
Date Sampled :		08/04/2011		08/04/2011							
Time Sampled :		09:30		13:20							
Dilution Factor :		1.0		1.0							
ANALYTE	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
pH	0.100	7.35		6.82							

RL = Reporting Limit
SEE NARRATIVE FOR CODE DEFINITIONS
To calculate sample quantitation limits: (RL * Dilution Factor)
"+" = See Narrative
Revised 09/99

Appendix C
Chain of Custody Records

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: Pittsburgh (water)

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact

Company Name: URS Corporation	Client Project Manager: Thomas Merski	Site Contact: Jim Pinta	Lab Contact: Carrie Gamber	COC No: 005408
Address: 501 Holiday Dr. Suite 300	Telephone: 412-503-4603	Telephone: 412-860-6342 (cell)	Telephone: 412-963-7058	__ of __ COCs
City/State/Zip: Pittsburgh, PA 15220	Email: James-Pinta@urscorp.com	Analysis Turnaround Time	Analyses	
Phone: 412-503-4700	David-Blaushild@urscorp.com	TAT if different from below: ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: K&L Gates Focused Site Assessment	Method of Shipment/Carrier: FedEx Next Day Air			
Project Number: 39938688.00001	Shipping/Tracking No:			
PO# 694872				

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	SVOCs	Metals (Total/Dissolved Lab Filtered)	Total PA Short List for Petroleum Products	HEM	Chloride, PH, Alkalinity, Acidity, TDS, TSS	Ammonia	Glycols	DRO/GRO	MBAS	Sample Specific Notes / Special Instructions:
TC-1	8/4/11	9:30		X													X	X	X	X	X	X	X	X	X	X	
AW-2	8/4/11	13:20		X													X	X	X	X	X	X	X	X	X	X	
				X																							
				X																							
				X																							
				X																							
				X																							
				X																							
				X																							
				X																							

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: J Pinta Jr.	Company: URS	Date/Time: 8/4/11	Received by: [signature]	Company: TA PGH	Date/Time: 8/5/11 1000
Relinquished by: To Fed Ex	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL 0018-1 (04/10)

Appendix D
Laboratory Case Narrative

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-2644-1

SDG No.:

Project: Focused Site Assessment

Client Sample ID	Lab Sample ID
TC-1	180-2644-1
AW-2	180-2644-2

Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

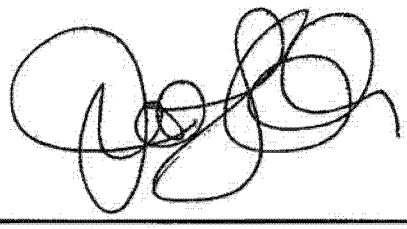
ANALYTICAL REPORT

Job Number: 180-2644-1

Job Description: Focused Site Assessment

For:
URS Corporation
Foster Plaza 4
501 Holiday Drive, Suite 300
Pittsburgh, PA 15220

Attention: Mr. James Pinta, Jr.



Approved for release.
Jill L Colussy
Project Mgmt. Assistant
9/13/2011 8:29 AM

Designee for
Carrie L Gamber
Project Manager II
carrie.gamber@testamericainc.com
09/13/2011

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238
Tel (412) 963-7058 Fax (412) 963-2468 www.testamericainc.com

CASE NARRATIVE

Client: URS Corporation

Project: Focused Site Assessment

Report Number: 180-2644-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 08/05/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.0 and 0.7 C.

The laboratory received a broken 1L amber bottle for sample TC-1 (180-2644-1).

The laboratory only received six VOA vials for sample AW-2 (180-2644-2) instead of nine.

LOW LEVEL VOLATILE ORGANIC COMPOUNDS
Methylene Chloride and Toluene were detected in method blank MB 180-10937/3 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
No difficulties were encountered during the semivolatiles analyses.

GAS RANGE ORGANICS
No difficulties were encountered during the GRO analyses.

GLYCOLS
Triethylene Glycol was detected in method blank MB 480-27399/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The continuing calibration verification (CCV) (CCV 480-27383/3) for Ethylene Glycol recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

DISSOLVED GASES
The following samples submitted for dissolved gases analysis were received with incorrect preservation (pH >2): AW-2 (180-2644-2) and TC-1 (180-2644-1).

1,2-DIBROMOETHANE AND 1,2-DIBROMO-3-CHLOROPROPANE BY MICROEXTRACTION AND GAS CHROMATOGRAPHY
No difficulties were encountered during the EDB and DBCP analyses.

DIESEL RANGE ORGANICS
No difficulties were encountered during the DRO analyses.

METALS
Antimony, Boron and Molybdenum were detected in method blank MB 180-10641/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Several analytes were detected in method blank MB 180-10417/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

GENERAL CHEMISTRY

The method blanks had compounds detected at a level that was above the method detection limit but below the reporting limit. The values should be considered an estimate, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

8/5/2011

Login Container Summary Report

180-2644

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
TC-1	180-2644-A-1	Plastic 1 liter - unpreserved			
TC-1	180-2644-B-1	Amber Glass 1 liter - Sulfuric Acid	2		
TC-1	180-2644-C-1	Amber Glass 1 liter - unpreserved			
TC-1	180-2644-D-1	Amber Glass 1 liter - unpreserved			
TC-1	180-2644-E-1	Amber Glass 1 liter - Hydrochloric	2		
TC-1	180-2644-F-1	Amber Glass 1 liter - Hydrochloric	2		
TC-1	180-2644-G-1	Plastic 500ml - with Nitric Acid	2		
TC-1	180-2644-H-1	Plastic 500ml - unpreserved			
TC-1	180-2644-I-1	Plastic 250ml - with Sulfuric Acid	2		
TC-1	180-2644-J-1	Voa Vial 40ml - with Sodium	p		
TC-1	180-2644-K-1	Voa Vial 40ml - with Sodium	p		
TC-1	180-2644-L-1	Voa Vial 40ml - unpreserved			
TC-1	180-2644-M-1	Voa Vial 40ml - unpreserved			
TC-1	180-2644-N-1	Voa Vial 40ml - unpreserved			
TC-1	180-2644-O-1	Voa Vial 40ml - Hydrochloric Acid	p		
TC-1	180-2644-P-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-Q-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-R-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-S-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-T-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-U-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-V-1	Voa Vial 40ml - Hydrochloric Acid			
TC-1	180-2644-W-1	Voa Vial 40ml - Hydrochloric Acid			
AW-2	180-2644-A-2	Plastic 1 liter - unpreserved			
AW-2	180-2644-B-2	Amber Glass 1 liter - Sulfuric Acid	2		
AW-2	180-2644-C-2	Amber Glass 1 liter - Sulfuric Acid	2		
AW-2	180-2644-D-2	Amber Glass 1 liter - unpreserved			
AW-2	180-2644-E-2	Amber Glass 1 liter - unpreserved			
AW-2	180-2644-F-2	Amber Glass 1 liter - Hydrochloric	2		
AW-2	180-2644-G-2	Amber Glass 1 liter - Hydrochloric	2		
AW-2	180-2644-H-2	Plastic 500ml - with Nitric Acid	2		
AW-2	180-2644-I-2	Plastic 500ml - unpreserved			
AW-2	180-2644-J-2	Plastic 250ml - with Sulfuric Acid	2		
AW-2	180-2644-K-2	Voa Vial 40ml - with Sodium	p		
AW-2	180-2644-L-2	Voa Vial 40ml - with Sodium	p		
AW-2	180-2644-M-2	Voa Vial 40ml - unpreserved			

CABOT-EPA 001617

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
AW-2	180-2644-N-2	Voa Vial 40ml - unpreserved			
AW-2	180-2644-O-2	Voa Vial 40ml - unpreserved			
AW-2	180-2644-P-2	Voa Vial 40ml - Hydrochloric Acid	P		
AW-2	180-2644-Q-2	Voa Vial 40ml - Hydrochloric Acid			
AW-2	180-2644-R-2	Voa Vial 40ml - Hydrochloric Acid			
AW-2	180-2644-S-2	Voa Vial 40ml - Hydrochloric Acid			
AW-2	180-2644-T-2	Voa Vial 40ml - Hydrochloric Acid			
AW-2	180-2644-U-2	Voa Vial 40ml - Hydrochloric Acid			